



avara

User manual for Avara alarm system for motorhomes, campervans and caravans

- complete version

Avara Lite

Avara Basic

Avara Basic Plus

Avara Moist

Avara Premium

The Avara alarm system is very easy to use. However, read this manual so that you understand what the alarm system really does. It is important for your safety.

Avara Lite is a basic alarm package offering optical smoke-, CO-gas- and propane gas detection and burglary, as well as remote control.

Avara Basic is a comprehensive night- and burglar alarm with all the most important functions:

- Main unit with integrated CO gas detector, optical smoke detector and an internal motion detector
- Propane Gas Detector
- Exterior siren
- Exterior motion detectors with automatic LED-lights
- Intruder detectors for doors and hatches
- Key fob for turning on /off burglar alarms

Avara Basic Plus is like the Avara Basic with the addition of remote control:

- Modem (2G, 4G, 5G and GPS/GNSS)
- Mobile and email notifications, remote operation and indoor climate reporting
- Tracking and positioning in maps (GPS)

Avara Moist

- Complete moisture monitoring with automatic notification to mobile and email
- Moisture test reports sent by email
- Collects history that provides documentation of the moisture condition over time for your motorhome or caravan

Avara Premium

The complete package consisting of all the above three packages.

See www.avara.no for full details on all services



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Part 1: Get started with Avara alarms

If you are reading this Manual in print, there may have come updates that can be found on our home page www.avara.no, in the Support section. The different Avara services will constantly undergo development and this manual will be updated accordingly.

Avara Lite

Registration

Your Avara Lite comes standard with a modem that allows access to more functions via your mobile phone. The system must therefore be registered with the modem serial number along with your contact information in order to work properly.

Go to www.avara.no, click on "My page" and follow the instructions.

The modem serial number is the key for registration and can be found on a label on the top of the modem.

Please enter the description of your caravan or motorhome as precisely as you can (brand, year of manufacture, etc.)

PS! The functions for your alarm; notification to the phone, remote control, tracking , etc., are not activated until the subscription is paid and registered.

Daily use

The most important functions; smoke-, CO- (carbon monoxide/carbon monoxide) and propane gas detection are "always on" and cannot be turned off. Alarms from these detectors gives alarm signals only from the main unit and to your mobile phone. Which detector that triggered the alarm is indicated by the respective LED on the main unit.

If you accidentally trigger the alarm yourself, for example when cooking, you can "hush" the alarm for 10 minutes by pressing the lower part of the lid on the main unit. The alarm comes back on by itself.

The main unit gives a sound signal as long as there is smoke or gas present, and ends by itself when normal levels are present. After such an event, the alarm is ready for re-detection without any further operation.

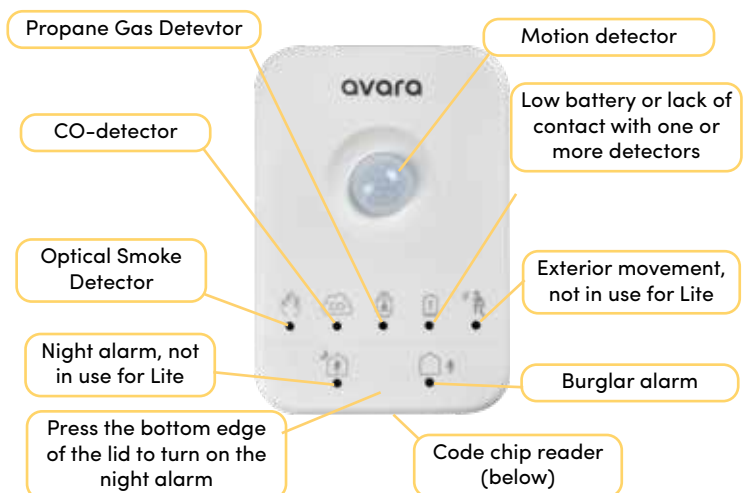
Note that the illustration above shows LED indicators that are not relevant for Avara Lite unless your Avara Lite system has been upgraded with more detectors.

Burglar alarm

The burglar alarm mode is used when needed and only when nobody is present in your motorhome or caravan. The burglar alarm is triggered by:

- The Motion Detector in your Main Unit

Operation and indicators



- The built-in Shock sensor in the main unit if the entire motorhome or caravan is moved

As always, the smoke-, CO- and propane gas detectors are also turned on and will send a message to the mobile if triggered.

Turning on and off the Burglar alarm

- Turn on and off the burglar alarm by holding the key tag against the bottom of the main unit (NFC mark), at the same time pressing briefly on the lower part of the lid. Hold the key tag in place for appr. 3 sec. until you can hear a sound signal confirming that the burglar alarm is turned on, and the burglar alarm LED indicator flashes red.
- After turning on the burglar alarm, short beeps will sound from the main unit for 3 minutes, which is the time available for you to leave the motorhome or caravan before the alarm is "armed."
- During this 3-minute delay time, you can freely walk in and out of your unit without triggering the alarm
- Triggered burglar alarms will give a high pitch sound signal in the main unit and send an alert to your mobile phone (If you have retrofitted an external siren, then this will also turn on).
- Triggered alarm sounds intermittently for 15 minutes and then turns off, and does not come back on
- After triggered burglar alarm, the LED burglar indicator will flash to show that the burglar alarm has been triggered. Turn off the alarm in the usual way by holding the key tag under the Main Unit and press the lower part of the lid for appr 3 sec. until you get the confirmation sound and the red light turns off.
- When you enter your motorhome or caravan with the burglar alarm activated, short beeps will come from the main unit to remind you that the alarm must be turned off within 20 seconds, otherwise it will trigger and the alarm goes off
- The burglar alarm may be operated remotely by the use of your mobile via "My Page" on www.avara.no.



Low-battery alerts

The main unit has a LED indicator marked with a battery symbol. If your main unit has low batteries, this indicator will flash red for a short time shortly after you turn on or off the burglar alarm, and only then. The battery indicator also flashes if the main unit does not connect wirelessly with other devices in the system. If the low-battery indicator is flashing and replacing the batteries does not help, contact your dealer for further examination.

Remote control and use of your modem

The Avara Lite alarm package comes with a modem as a standard device. It provides functions such as remote control of the alarm, alarm notification to your mobile phone, GPS tracking and positioning in maps. Visit our website www.avara.no and log in to "My page". There you will get access to your specific alarm and related services.

Since these services are constantly updated, you can go to our website for the latest information as well as prices for the different subscriptions.

Upgrades

Avara Lite is a specially designed alarm system for caravans in a fixed/static location. The main difference to the other packages is the lack of e.g. external detectors that are part of the night alarm functionality (considered less important for static locations). However, this does not prevent the Avara Lite from being upgraded to provide all available features found in the Avara product- and service range.

Avara Basic, Basic Plus and Premium

PS! Avara Premium also includes Avara Moist, see separate section.

Registration

Your Avara Basic Plus and Avara Premium comes standard with a modem that allows access to functions via your mobile phone. These systems must therefore be registered using the modem serial number along with your contact information.

If you have the Avara Basic, there is no need for any registration for the alarm system to work.

Go to the www.avara.no, click on "My page" and follow the instructions. The modem

serial number can be found on a label on top of the modem.

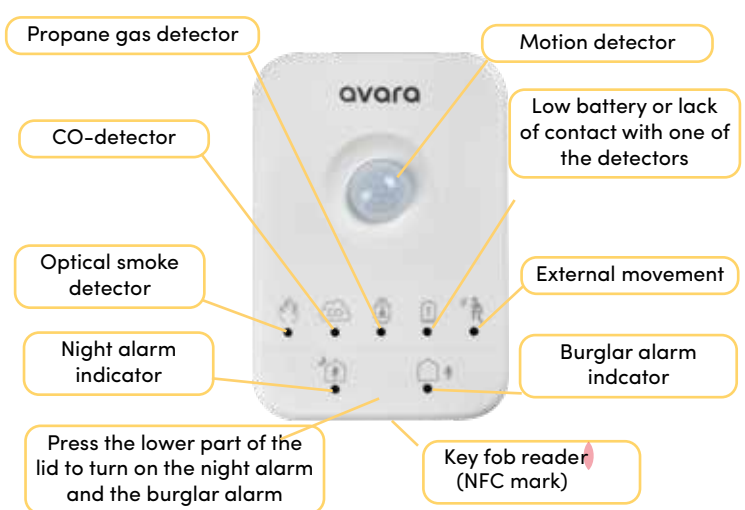
Please enter the description of your caravan or motorhome as precisely as you can (brand, year of manufacture, etc.)

PS! The functions that you get access to via the modem - alarm notifications, remote control, tracking, etc., are not activated until the subscription is registered and paid.

Daily use

The most important functions: smoke, CO-gas (carbon monoxide) and propane gas detection, are always on and cannot be switched off. No form of operation is required in daily use to enable this function. Alerts from these detectors only gives alarm signal from the main unit, not using the external siren. Which detector triggered the alarm is indicated by use of the different LED lights on the main unit lid.

Operation and indicators



If you have installed the Avara Moist moisture detection system, it is constantly switched on and has no specific on- or off function. You will automatically be notified by messages to your mobile phone/e-mail if moisture is detected.

If you accidentally trigger the alarm yourself, for example when cooking, you can "hush" the alarm for 10 minutes by pressing the lower part of the lid of the main unit. The alarm comes back on by itself.

The alarm gives a signal as long as there is smoke or gas present, and ends by itself when the smoke or gas disappears. The alarm is automatically ready for re-detection after this.

Night alarm

The Night alarm is intended for use if you want extra security - aka having a "night watch" on the outside.

The night alarm alerts you when this happens:

- Intrusion directly through doors and hatches that have intruder detectors installed
- External movement close to the motorhome / caravan with a duration of more than 30 seconds (by use of the external detectors).

As always, these detectors are also "always on":

- Smoke
- CO gas
- Propane gas

How to use the Night alarm

- Your Night alarm is turned on by pressing the lower part of the lid of the Main Unit
- The night alarm is turned off manually by pressing the lower part of the lid once again, or you may let the alarm turn itself off automatically by simply going out or starting to drive
- When the night alarm is on, you can move freely indoors without triggering an alarm
- External detectors will immediately activate their LED-lights if someone gets close to the motorhome / caravan, but they will not activate the alarm inside until there has been movement in the alarm zone for at least 30 seconds
- The Night alarm gives alerts/signal only in the main unit inside, not in the external siren
- A triggered night alarm stops by itself when detected gas/smoke dissolves, or the external movement disappears. The alarm is automatically ready for new alerts

When you turn on the night alarm, the green LED indicator at the lower left on the front of the main unit flashes rapidly for a few seconds, then briefly every 10 seconds.

Note! The alert signals for external movement and gas/smoke/intrusion are different. Alerts resulting from any of the gas-, smoke-, or intrusion detectors have a high frequent beep signal (intense). Alerts resulting from outside movements cause shorter sound pulses (less intense). It is therefore possible to judge what kind of incident that triggered the alarm.

The external detectors have a coverage area (alarm zone) approx.1-1.5m out from the wall and approx. 5-6m longitudinally along the wall (depending on how high on the wall they are

mounted). In daylight, there will only be short flashes from the LED-lights when somebody is moving in the alarm zone, while in the dark the short flashes are followed by constant light for 10 sec. When the light goes out, it is automatically reactivated.

In the event of a triggered warning signal, an audible signal is given only for as long as movement is in progress.

The external detectors do not recognize humans by themselves (or any other physical matter), but recognize any temperature difference in motion.

This means that they will also be able to give alerts if larger animals appear in the alarm zone. You may also be alerted if other objects are moving in the wind reflecting varying sun beams towards the external detectors. The detectors are therefore not necessarily alerting something illegal or undesirable, but they are intended to give a warning that something is happening outside and that you may wish to investigate.

The Smart Night Alarm - the function that can turn off the night alarm automatically makes use of several detectors that is co-working. When you move from the inside out, the detectors "see" which direction you are going and can distinguish this from an intrusion/burglary (which moves the opposite way).

If you do not go out of your motorhome in the morning, but simply get up and start driving, the shock sensor in the main unit will detect that the motorhome is running and will turn off the night alarm (automatic). As always, two short beep signals from the main unit will confirm that the alarm is turned off.

If your alarm package contains a modem and associated valid subscription, you will also receive an alarm notification to your mobile phone (and other mobile phones in your alarm receiver register in your My Page). If you do not have a modem today, this can be retrofitted at any time. See more about all these features on www.avara.no.

If you have a Universal gas detector installed, it is automatically switched on when the night alarm is turned on (no other way of turning this detector on). It will alert you if it detects abnormal gases. Please note that it reacts to a large number of different gases that also normally may be present in your motorhome or caravan (alcohol vapor, hairspray, etc.) and may therefore cause false alarms.

Burglar alarm

The burglar alarm mode is used when needed and only when everyone has left the motorhome or caravan.

Burglar/intrusion alarms are triggered by:

- Intrusion detectors in doors and hatches
- Main unit motion detector (which covers burglaries through hatches and windows that do not have burglar detectors)
- Shock sensor in the main unit if the entire motorhome/caravan is physically moved

Note – the burglar alarm is not triggered by external movement like in the Night alarm mode, but the LED-light in the external detectors will turn on when motion is detected in the alarm zone.



As always, these detectors are also “always on”:

- Smoke
- CO gas
- Propane gas

How to use the burglar alarm (intrusion alarm)

- Turn on and off the burglar alarm by holding the key tag close to the bottom of the main unit, and press once on the lower part of lid of the main unit. Hold the key tag in place until you hear the confirmation beep from the main unit. The LED intrusion indicator for the burglar alarm starts to flash red. When turning off the alarm, the LED indicator stops flashing and you get a beep from the main unit.
- After turning on the burglar alarm, short beeps come from the main unit for 3 minutes before the alarm activates.
- During this 3-minute delay time, you can freely walk through open doors and use the hatches without triggering an alarm.
- A triggered burglar alarm gives alerts in both the main unit and the external siren
- Triggered alarm sounds intermittently for 15 minutes and turns off, and does not come back on
- After any triggered burglar alarm, the LED intrusion indicator will flash to show that the burglar alarm has been triggered. Turn off the alarm in the usual way.
- When you open a door in your motorhome or caravan, short beeps will come from the main unit to remind you that the alarm must be turned off within 20 seconds, otherwise it will trigger the siren.
- Triggered burglar alarm automatically sends SMS to the mobile phones that you have registered in your alarm receiver register in your My Page.
- Burglar alarms can be remotely controlled from your mobile phone anywhere in the world if you have a modem.



Delays

Note that there are differences in alarm delays depending on whether your alarm is in the Night alarm mode or the Burglar alarm mode. In the burglar alarm mode there is a 20 sec. delay from detection by the intrusion detectors and until the alarm signal goes on. In the night alarm mode, this delay is only 4 sec.

When the alarm is turned on, there is always a 3-minute delay from when the alarm is turned on until it is armed for both the burglar alarm mode and a night alarm mode.

Battery alert

The main unit has a LED indicator light marked with a battery symbol. If any detector in the

system has low battery or does not connect to the Main Unit, this battery symbol will flash red for a short time shortly after turning on or off the night or burglar alarm, and only then. Thus, this LED indicator does not apply only to the main unit.

To find out which detector has a weak battery, or does not connect, turn on the night alarm and inspect all the detectors. Each one should flash briefly green every 10 seconds from their own LED lamp. If the detector LED flashes red, there is a weak battery in that detector. Change all the batteries in the detector if this happens (read about battery changing in part 2 of this user manual, detailed technical description of each detector).

If a detector LED does not flash at all, it is either completely out of power or defective. Change all batteries. If all the detectors flash green, it is the batteries in the main unit itself that is weak and need to be changed

(NOTE - Siren controllers manufactured before 2022 flashes only when an alarm goes off to indicate a weak battery. Therefore, check (change) the batteries in this unit every 3. year).

Remote control and modem

Most Avara alarm sets come with a modem included. It offers several functions such as remote control of the alarm, alarm notification to your mobile phone, temperature and relative humidity inside your motorhome/caravan, GPS tracking and more. Without a modem, you only have a local alarm.

With a modem and a paid subscription, you can access "My Page" from www.avara.no. Since these services are constantly updated, you can go to our website for the latest information as well as prices for the different subscriptions.

Alarm packages without a modem can be upgraded with a modem at any time.

Avara Moist

It is of utmost importance that the installation of Avara Moist has been carried out by a dealer with expertise in leakages in motorhomes and caravans. Only this way will the leakage detection system provide you with good and relevant measurement data. A separate manual for installation can be found on our website.

The Avara Moist system does not need any active operation from the user. The system is always on. The moist sensors automatically send one measurement per day. Measurement data can be found in "My Page" in www.avara.no, Under the Dashboard tab there are basic functions and all moist sensors are listed. Login information should have been provided at the time of installation.

If high humidity is detected over a certain period of time, you will receive an alert/SMS message stating which sensor has detected high humidity. You are then responsible for ensuring that the notification is followed up. We strongly encourage you to bring your motorhome or caravan to your dealer shortly after, and have the affected area checked. Any necessary action may then be taken while the damages are small.

A "case" is created when you receive a moisture alert in My Page. You can process the case yourself by entering a description of what fixing was done, e.g. an invoice number for the repair performed, or a description of another reason for the moisture alert. This information will be stored in the Avara data system and will constitute important documentation for any later sales/trade-ins.

Registration of cases is done following the tab "Reports" in the My Page. You can also retrieve

a recent moisture report at any time from the same location in My Page.

You can expand the existing system with more sensors if needed (max. 64). Note that all new sensors must be paired to the modem. Pair the sensors before installing them as it may be difficult to get to the pair button on the sensor after installation.

Storing your leakage data – change of ownership

Storing historical moisture measurement data will increase the value of your motorhome or caravan for later sale. When changing ownership, you may transfer the measurement data to the new owner. You do this by going to My Page, Settings, My account and choose the tab Change of ownership. You may now enter the contact information of the new owner – of course, only on the condition that the new owner will continue the subscription and moisture alert service. Note that only previous measurement data will be transferred to the new owner, all other data will be deleted.

Registration of moist sensors

You should check closely that the mechanic doing the installation has noted the exact location of all the installed sensors. If not, this should be done as soon as possible. The Avara Moist and any other Avara alarm set containing moist sensors, include a special form for this use. Make sure you get a copy of this form from the dealership doing the installation. If this is not done, it is impossible to know where moisture may have occurred when you receive a moisture alert.

Register the exact location of each sensor by going to the Settings on My page, and choose Units and edit the information about the location of the sensors. Be as precise as necessary to be able to locate the sensor at any later time.

The sensors are all marked with a four-digit number (numbers and letters), which can be found in the Units section

The modem in the system should be constantly connected to 12V so that it is not without power when you turn off the main switch in the motorhome / caravan. This is safe to do since the modem consumes so little power that it will not drain your habitat battery.











If constant 12V or 230V is not available, e.g. during storage, a 6V backup battery box (AV111) can be used to power the Avara Moist system for many years without any other power source.

If you have Avara Premium, the backup battery box will not be able to power the alarm during normal use, only during storage.

The moisture sensors have a battery that lasts the entire life of the sensor (estimated 15 years).



Part 2: Technical information

Avara alarm components	
<p>AV100 - Avara main unit</p> <p>Used for operation of the alarm system inside the motorhome / caravan. Contains IR (Infra Red) motion detector, CO detector and smoke detector as well as moisture and temperature sensors. Normally installed high on the wall together with other control panels above the habitat door.</p>	
<p>AV108 - Modem</p> <p>Modem that communicates with Avara's cloud solution. Alarm messages and alerts are forwarded to mobile phones and/or e-mail recipients. The modem also includes a GPS unit for tracking and location. The modem connects to the 12V habitat battery and/or a 6V backup battery box.</p>	
<p>AV102 - External detector</p> <p>Installed high on the side walls of the motorhome/caravan. Built-in IR motion detector that detects movements within approx. 1 - 1.5 m from the wall, and 3 m to each side. Warning LED lights flashes and lights when active.</p>	
<p>AV103 - Burglar detector/intrusion detector</p> <p>PIR Motion detector that is placed in doorways/cargo compartments and detects any movement in or out.</p>	
<p>AV101 - Propane gas detector</p> <p>Selective propane and butane detector. Mounted by the floor and should be connected to constant 12V. May use 6V backup battery box during storage.</p>	
<p>AV107 - Universal gas detector</p> <p>Broad spectrum gas detector. Installed at head height and connected to constant 12V. Works only in Night Alarm mode. PS - Universal gas detectors react to a large number of gases, which can lead to false alarms (6V backup battery box should not be used.).</p>	
<p>AV104 - Siren and siren controller</p> <p>Mounted covertly in e.g. engine compartments, cabinets, etc. The siren controller contains a battery pack that also powers the siren.</p>	
<p>AV110 - Siren</p> <p>Siren without siren controller. Spare part for AV104.</p>	
<p>AV105 - Key tags/fobs</p> <p>Alarm activators to turn on /off the burglar alarm.</p>	
<p>AV109 - Moisture sensors</p> <p>Moisture sensors containing moisture- and temperature sensors. Need to be installed by a professional workshop. The probe is inserted into the structure and measures relative humidity. The sensors have an internal battery with an expected service life of more than 15 years.</p>	
<p>AV111 - Backup battery box</p> <p>Used when needed for backup power supply to modem and propane gas detector. Used during storage and as backup if 12V power supply is lost.</p>	

NB: the aspect ratios between the components differ from reality

Main unit

The main unit is the control panel of the system and contains:

- Optical smoke detector (always on/active)
- CO gas detector (always on/active)
- Humidity sensor (RH%)
- Temperature sensor
- Motion detector (PIR – Passiv Infra-Red)
- Indicator LEDs for triggered alarm functions
- Sound sensor for all alarm functions
- Operation of night and burglar alarms



The Night alarm can be turned on and off by pressing on the lower part of the lid.

The Burglar alarm is turned on and off by holding the key tag close towards the bottom of the unit (marked with NFC), while pressing the lower part of the lid. Keep the key tag in place until a confirmation signal is heard and the LED indicator for burglar alarm lights up in red.

The smoke detector makes use of an optical detector that quickly detects particles from the smoke. The CO (carbon monoxide) detector has high selectivity so that it does not easily give false alarms from other types of gases. The CO detector supplements the optical smoke detector by early warning of invisible gas from smoldering fires and incomplete combustion in gas appliances. This can emit highly toxic and odorless carbon monoxide.

The main unit has a built-in relative humidity sensor and temperature sensor that provides indoor climate information to your mobile phone or PC via internet if the alarm package is equipped with a modem. The main unit is battery operated, wireless and has no wires connected.

The main unit has LED indicators with self-explanatory symbols that show the type of alarm that has been triggered. The main unit is fixed on a bracket so that it can be easily taken on and off from this when needed, without destroying the fastening tape.

Battery replacement in the main unit is done by pulling the lid out at the bottom. It is hinged

Main unit technical specifications	
Features	<ul style="list-style-type: none"> • Control panel for operation of the burglar alarm and the night alarm. • Optical Smoke Detector • Motion detector • Carbon monoxide (CO) detector • NFC chip reader
Motion detector	Passive Infra-Red
Dimensions H, W, D	102x72x31mm
NFC	13.54Mhz
Power consumption	approx. 0.1 mA.
Power supply	3 pcs. internal replaceable AA alkaline batteries
Radio communication	868 MHz band

at the top. 3 batteries are used, type AA alkaline batteries. Rechargeable batteries or lithium batteries should not be used. Exercise caution when changing batteries as you also have access to fragile electronic circuits. The batteries have a lifespan of several years depending on the use.

Under the lid of the main unit there is a pairing button for pairing the main unit with other units. See separate section on the pairing procedure.

Propane gas detector

The propane gas detector is always on and can never be turned off when connected to the 12V voltage. It should be placed close to the floor and warns of slow build-up of gas. Short-term harmless deposits of gas do not cause alarms (dissolving in approx 60 sec). The LED indicator blinks green briefly every 10 seconds to show that the detector is on. As soon as gas is detected, the LED indicator flashes red, but will not give an alarm until the gas has been present uninterrupted for at least one minute. See separate section for testing the propane gas detector.



The propane gas detector must be connected directly to the living quarter's 12V battery to ensure constant power even if the main switch of the motorhome or caravan is turned off. This is to ensure that this important detector always is operational.

The propane gas detector may also be powered with a 6V backup battery from the Backup battery box. The propane gas detector can therefore be active in power saving mode even without access to either 12V or 230V.

The propane gas detector's power saving mode ensures that the detector never drains and destroys the main habitat battery even if the motorhome/caravan is placed in storage. The power saving mode is activated when the habitat battery has not detected charging during a period of 3 days (power falling below 13V). Note - in power saving mode, the detector no longer checks continuously for gas, but does this 4 times a day. Therefore, the power saving mode is only active/used when the motorhome/caravan is unoccupied.

The propane gas detector automatically connects to the backup battery if 12V is lost. When the detector runs on the backup battery, it will always be in power saving mode. Backup battery

Technical Specifications Propane Detector	
Dimensions H, W, D	45x45x17.5mm
Power consumption in normal mode	Approx. 25 mA
Power consumption in burglar alarm mode and saving mode	Approx. 0.25 mA
Primary power supply	External 5.5 - 15 V DC
Secondary power supply	External 5.5 - 15 V DC
Sensitivity	Approx. 0.4% / 20% LEL
Radio communication	868 MHz band
Gas detection	Propane- and butane gas

should therefore never be used as the only power supply, but always in combination with 12V.

From the year of production in autumn 2022: The voltage level that determines when the detector will go into power saving mode, will be automatically adjusted according to the type of power supply. Caravans without battery that have a fixed power supply of approx. 12V will then go into power saving mode when the voltage is below 10V.

The LED indicator light is also a push button used for pairing and testing. See separate section for this.

Intrusion detector (Burglar detector)

The intrusion detectors protects against unwanted access through doors and hatches. They are active in the night alarm- and burglar alarm mode. The detector is passive infrared (PIR) and detects differences in

temperature of something "physical" moving. The coverage area of the detector is approximately 1-1.5m straight out from the detector, and the PIR lens has a maximum 90 degree opening angle (45 degrees to all sides from center). Sensitivity of the lens decreases with angle and distance.



The push button on the detector works both as a pairing button, test button and LED indicator. See separate section on pairing and testing..

Battery replacement

The front/lid is hooked to the bottom edge and pressed into the top part of the detector box. Remove the lid by forcing it outward from the top side. There is a slot for large screwdrivers for this purpose on top of the detector. It may be done by hand as well. 3 batteries, type AA alkaline cells are used. Rechargeable batteries or lithium batteries should not be used. Use caution when replacing batteries as you also have access to fragile components inside the detector. The batteries have a lifespan of several years depending on the use. NOTE - Make sure to observe correct placement of the poles of the batteries into the unit. Incorrectly inserted batteries will destroy the device.

Technical Specifications Burglary Detector	
Dimensions H, W, D	89x70x24mm
Motion detector	Passive Infrared
Power consumption	< 0.1 mA
Power supply	3 pcs. internal replaceable AA alkaline batteries
Radio communication	868 MHz band

External detector

Utvendige detektorer er trådløse bevægelsesdetektorer som tænder lys og varsler bevægelse tThe External detector is a wireless motion detector that turns on LED lights and warns of movement close to the side of the motorhome or caravan. The external detectors are active in both burglar alarm- and night alarm mode, but have different behavior depending on the alarm

mode.

In both the night alarm mode and burglar alarm mode the LED light in the detectors will always flash twice at the first detected movement and then turn on the LED lights (if it is dark outside) (applies to detectors manufactured in 2022 and later. For previously manufactured detectors, it will not flash before the constant light comes on). If it is dark outside, the flashing will be followed by constant light for 10 sec. New movement repeats this process.



Movement for at least 30 seconds will trigger the internal sound signal in the main unit. The signal lasts as long as the movement lasts and ends by itself. The signal produces shorter sound beeps than for other alarm signals.

In the burglar alarm mode, external detectors will not give an alert inside or via modem if movement is detected, only turn on its LED lights.

The detector flashes green in one of the two LED lenses approx every 10 sec when either the night alarm or burglar alarm is turned on and the batteries are fresh. If the batteries are weak, the LED will flash red in this mode. Replace the batteries immediately if you observe this. Weak batteries or a defective detector is also alerted by a flashing LED battery indicator on the main unit (see more in the Main Unit section).

The push button on the detector is used for pairing and testing. See separate section on this.

The coverage area (alarm zone) of the detector is approximately 1-1.5m straight out from the detector and approx. 5 - 6m in length (2,5 - 3 m to each side). There is no definitive limit, but a gradual weakening of the detectors sensitivity. Sensitivity decreases with angle and distance. The maximum opening angle is approx. 90 degrees. (45 degrees to all sides from center of the lens).

Battery replacement

Unscrew the four Torx No. 10 screws on the underside of the detector. When the screws are loosened, they will fall halfway down, but kept in place. You can then pull on the screws to get the contents out of the housing - it may get slightly stuck in the gasket. There are 6 batteries

Exterior detector technical specifications	
Dimensions H, W, D	50x218x45 mm
Motion detector	Passive Infrared
Power consumption normal	< 0.1 mA
Power consumption with light	350 mA
Power supply	6 pcs. replaceable AA alkaline batteries
IP classification	IP66
Radio communication	868 MHz band

of type AA alkaline in the detector. NOTE - Make sure to observe correct placement of the poles of the batteries into the unit. Incorrectly inserted batteries will destroy the device. This damage is therefore not considered a warranty claim.

Siren

The siren is wireless and gives a loud sound signal if the burglar alarm is triggered. The siren does not work in the night alarm mode. If an alarm is triggered, a sound signal is periodically given for 15 minutes. When the burglar alarm has been triggered, it will be indicated on the main unit's LED indicator until the alarm is turned off (the burglar alarm LED flashes rapidly red).



The siren consists of a sound transmitter connected by wires to the siren controller, which is also the electronics unit and the siren's power supply (batteries inside). NOTE - The siren driver should never be connected to any external battery.

The battery indicator on the siren controller flashes green when the batteries are fresh and red when they need to be replaced. There are no flashes if the detector is un-paired with the head unit or not working.

Devices manufactured before 2022 flash only when the siren is triggered.

Low batteries or a faulty siren controller are also notified with flashing LED battery indicator on the main unit.

The pair and the test button on the siren controller are in the form of two blank contact points that you short-circuit. See separate section for pairing and testing.

The switching terminal on the siren driver is the output for the siren sound transmitter.

Battery replacement

Sirenedriveren (den sorte boksen) inneholder 8 stk. AA The siren controller contains 8 type AA alkaline batteries. Unscrew the four Torx No. 10 screws on the lid of the siren controller. Pull out the battery holder from the controller box. Be careful handling the cord between the battery

Technical Specifications Siren Controller	
Dimensions H, W, D	80x80x48mm
Standby power consumption	< 0.1 mA
Power consumption in active mode	approx. 250 mA, limited to approx. 500 mA
Power supply	8 pcs. internal replaceable AA alkaline batteries
IP classification	IP66
Radio communication	868 MHz band

Technical specifications Sound transmitter	
Dimensions H, W, D	53x50x63mm
Tension	6 - 16 V
Power consumption max at active siren	290 mA
Volume	123 dB of 10 cm. distance
Radio communication	868 MHz band

holder and the lid since the back side of the lid constitutes the electronics card of the siren controller. After replacing the batteries - make sure that the gasket is in the groove and that the cord is not pinched when you put the lid back on.

Universal gas detector

The universal gas detector (also called "anesthetic gas detector") automatically turns on when the night alarm is turned on. The universal gas detector must be connected to a constant 12V power supply. If you have the universal gas detector installed, we do not recommend that you turn on the night alarm before actually going to bed. An active universal gas detector may give false alarms from a variety of different gases such as alcohol debris and perfume.



The LED button on the detector works both as a pairing button, test button and an indicator.

Technical Specifications Universal Gas Detector	
Dimensions H, W, D	45x45x17.5mm
Power consumption when active	Approx. 25 mA
Power consumption when inactive	< 0.1 mA
Primary power supply	External 5.5 - 15 V DC
Secondary power supply	External 5.5 - 15 V DC
Radio communication	868 MHz band

The detector should flash green briefly every 10 seconds when active. If it detects gas, it will start flashing red and give a signal in the main unit.

Modem

The modem connects the Avara alarm system with the internet and Avara's cloud solution on www.avara.no. Alarms, remote control, GPS tracking and more is available for users with a valid subscription. The modem is connected to a constant 12V power supply from the habitat battery, and may also make use of a backup battery pack enabling disconnection of the 12V supply. The 6V backup battery pack secures full functionality during e.g. winter storage.



Button functions:

- «Test» sends data to the server via the telecommunications network
- “Pairing” puts the modem in pairing mode and sends all pairing information to the server
- «Reset» performs a system reset
- LED indicators:
 - The “antenna symbol” (left) blinks slowly when the modem seeks connection, and blinks fast when sending data
 - The “satellite symbol” (right) flashes red when the modem searches for a new location. When the position is found, the indicator light goes out.

Power Supply:

The left terminal is for constant 12V power supply. The right terminal is for optional use of a 6V backup battery. The modem draws power from the 12V supply as long as 12V is present, and automatically switches to the backup source if 12V is lost.

In backup operation, the modem is always in power saving mode. In power saving mode, it will take up to 24 hours before remote control of the alarm takes effect (ie the alarm is switched on or off from your mobile phone or PC). A triggered alarm will nevertheless always be forwarded immediately.

Modem Technical Specifications	
Dimensions H, W, D	83x83x17mm
Connection	2G/4G/5G/NB-IOT/CAT-M1
Positioning	GPS/Galileo/Glonass/Beidou
NFC	13.54 Mhz
Power consumption in power saving mode	Approx. 0.25 mA.
Power consumption when 4G/5G is active	12.mA.
Power consumption when 2G is active	Up to 350 mA.
Primary power supply	External 5.5 - 15 V DC
Secondary power supply	External 5.5 - 15 V DC
Radio communication	868 MHz band

Moisture sensors

12 moist sensors are included in the Avara Moist package, and more sensors can be ordered if needed. The location is determined by your dealer who has experience with where your motorhome / caravan is most exposed to moisture and where water / moisture accumulates. The starting points are the places where a manual moisture measurement is normally performed (water ingress test). The moist sensors have an internal battery with an expected lifetime of more than 15 years.



Technical specifications moisture sensors	
Dimensions	Sensor housing: diameter: 33.5 mm, height: 9.5mm. Sensor probe: diameter: 6 mm, length: 20 mm
IP classification	IP66
Power consumption	< 0.001 mA
Power supply	CR2032 Lithium Battery
Radio communication	868 MHz band

Key tags/fobs

The key tags included in the Avara alarms are used to activate and deactivate the burglar alarm.



Technical specifications key fobs	
Dimensions H, W, D	40x32x4mm
Frequency	13.54MHz

Backup battery box

Battery box for optional power supply of Avara Moist, or as a backup for the other alarm packages.



Technical specifications backup battery box	
Dimensions H, W, D	39x96x143mm
Power	6V
Battery	4 pcs. D-cell (not included from Avara)

Service and maintenance

The built-in CO sensor in the main unit has a lifetime of approximately 5 years. It may last longer, but to ensure that one of the most important functions of the alarm is working, the sensor should be replaced by Avara before 5 years (Avara service). This is a general recommendation and applies to all types of gas- and smoke alarms.

During the Avara service, the smoke detector is also cleaned, the detector's software is updated as needed and all other functions are checked.

Only the main unit should be sent to Avara for service. The main unit can be detached from the mounting bracket by pulling it straight out. The bracket is left on the wall so you can easily put the device back by pressing it into place. The batteries in the detectors are ordinary replaceable alkaline AA battery cells. These can last for many years. Even if the batteries are not used up, they must be replaced no later than 5 years.

Contents of the Avara alarm packages

Component	Avara Lite	Avara Basic	Avara Basic Plus	Avara Moist	Avara Premium
Main unit	1 pc.	1 pc.	1 pc.	o	1 pc.
Modem	1 pc.	o	1 pc.	1 pc.	1 pc.
External detector	o	2 pc.	2 pc.	o ₁	2 pc.
Intrusion Detector	o	3 pc.	3 pc.	o ₁	3 pc.
Propane Gas Detector	1 pc.	1 pc.	1 pc.	o ₁	1 pc.
Siren and siren controller	o	1 pc.	1 pc.	o ₁	1 pc.
Key tag	2 pc.	2 pc.	2 pc.	o ₁	2 pc.
Moisture sensors	o	o ₂	o	12 pc.	12 pc.
Backup battery box	o	o	o	o ₁	o
Universal gas detector	o	o	o	o ₁	o

o - option

o₁ - expansion option that assumes that it is also expanded with a main unit

o₂ - expansion possibility that assumes that it is also expanded with a modem



Part 3: Test procedure

It is vital that the gas and smoke detectors work properly . Therefore, they should be tested regularly.

Test if a device is paired with the main unit

To check if a device is paired with the main unit and is communicating wirelessly, you can press the pairing button on the detector at any time. If the device is paired, working and the battery is in working order, a short sound signal will be heard from the main unit after 4 seconds.

Test of the Propane Gas Detector

Blow short bursts of lighter gas against the propane gas detector. The LED indicator should then flash red rapidly. An audible alarm is not triggered until gas has been detected constantly for one minute.

In practice, this is very difficult to achieve with a lighter gas test. However, you can be sure that the detector will work if 1) it flashes red, and 2) you get a receipt signal from main unit when you press the pairing button on the gas detector. Propane gas detector testing cannot be done when the detector is in power saving mode.

Test of the smoke detector in the main unit

Press and hold the lower part of the main unit lid for 10 sec. until the smoke alarm is triggered and you hear an alarm signal from the main unit

Test of the CO detector

This detector cannot be tested by the user.

Test of the external detectors while in the Night Alarm mode

Turn on the night alarm, go out of the motorhome/caravan and close the door (there must be no one left inside). Wait at least 3 minutes for the alarm to become active, and then walk back and forth under the external detector.

During daylight, the detector's LED lights will flash rapidly twice (detectors manufactured after 2022, older detectors will give constant light). When it is dark outside, the flashes will be followed by constant light for 10 seconds. This process repeats itself as long as there is movement in the detection zone. When there is movement in the detection zone for at least 30 seconds, the main unit will give an alarm signal.

If the external detectors work correctly in the Night Alarm mode, they will also work properly in the Burglar Alarm mode.

Test of the intrusion detectors in the Night Alarm mode

Turn on the night alarm and go out and close the door (there must be no one left inside). It takes 3 minutes for the alarm to become active. Expose yourself to the detectors by opening doors and hatches where such detectors are installed. The detection should then trigger the internal alarm in the main unit within a few seconds (not the outside siren).

The intrusion detectors are triggered by people appearing in the door/hatch, and not by the actual movement of the door or hatch.

Note that you must do this test by coming from the outside. If you try to test the intrusion detectors from the inside, the alarm will think that you are a resident who is coming out, and the alarm will automatically turn off instead.

Test of the external siren/burglar alarm test

Turn on the burglar alarm using the key tag and remain inside. It takes 3 minutes until the alarm is active. Move in front of the main unit. The alarm then starts to give short beeps for 20 seconds before the siren goes off. A signal should come from both the main unit and the external siren.

The intrusion detectors will also trigger the alarm, but these do not need to be tested again if they were tested in the night alarm test.

Turn off the alarm in the same way as you turned on the alarm with the key tag.

Part 4: Pairing procedure

All Avara alarm packages are already paired. If you buy additional detectors, they must be paired manually to the system. If a detector needs to be replaced, the old one must be unpaired. See the separate section on un-pairing.

The principle of the pairing procedure is to 1) put the "owner" of the detectors in pairing mode, and then 2) press the pairing button on the detector that you want to pair.

"Who owns" a detector depends on the type of detector.

- All alarm detectors are paired to the main unit (main unit is the owner)
- The main unit pairs to the modem (modem is the owner)
- Moisture sensors pair to the modem (modem is the owner)

Pairing detectors

- Put the main unit into pairing mode by pressing the pairing button under the lid. Open the lid/front of the main unit by pulling out the lid at the bottom edge - the lid is hinged at the top and split by the air openings around the unit.
- In the middle of the print card, there is a small push button labeled "Pairing." Press this button once and the yellow LED will light up constantly for 4 seconds. It will then start flashing when it's ready for pairing
- Now press the pairing button on the detector you want to pair
- If pairing was performed correctly, an audible signal should be heard from the main unit and the pairing light in the main unit will blink faster for a short time.
- Repeat the process if multiple detectors are to be paired
- Up to 64 devices can be paired to the system
- You can take the main unit out of pairing mode by pressing the pairing button again, or let it go out of pairing mode on its own after one minute

Pairing key tags/fobs

- Key tags are paired to the main unit almost in the same way as detectors are paired

- Up to 8 code tags can be paired to the main unit
- Press the pairing button inside the main unit and close the front
- Wait until the yellow light starts to flash/blink
- Hold the key tag in position towards the center of the bottom edge of the main unit (marked NFC) while simultaneously pressing the bottom part of the lid. It is important to hold the key tag in place for approx. 4 seconds until a short sound signal is heard as a confirmation of successful pairing.
- Repeat the process if multiple key tags are to be paired
- Take the main unit out of pairing mode by pressing the pairing button inside, or let it go out of pairing mode on its own after one minute

Pairing of the main unit to the modem

The main unit is paired to modem (the modem is the “owner”).

- Put the modem into pairing mode by pressing the PAIRING button on the modem
- A yellow LED on the modem flashes when the modem is in pairing mode
- Press the pairing button inside the main unit
- Successful pairing is confirmed by fast flashing of the yellow LED on both devices and a sound signal from main unit.
- Take both devices out of pairing mode by pressing the pair button again, or let them go out of pairing on their own after one minute

Pairing of moisture sensors to the modem

Moisture sensors are paired to the modem. Moisture sensors that are supplied as part of a complete alarm package are already paired to their modem.

Pairing additional moisture sensors:

- Put the modem into pairing mode by pressing PAIRING button on the modem
- A yellow LED on the modem flashes when the modem is in pairing mode
- Press the pairing button on the moisture sensors. This button is available in the small hole present at the top of the moisture sensor. Use a blunt object to press the button once.
- Successful pairing is confirmed by fast flashes in both the sensor and on the modem
- Repeat the process if multiple sensors are to be paired
- Take the modem out of pairing mode or let it go out of pairing mode on its own after one minute.

Unpairing detectors

If a detector needs to be replaced or is no longer to be part of the alarm system, it must be un-paired and removed from the main unit’s memory. If not, it will forever be reported as “missing” in the system. The main unit keeps record of all its paired devices and will notify you if one is missing. A missing device will be notified by flashing in the battery LED indicator on the

main unit shortly after you turn on or off any alarm mode.

NOTE - This process un-pairs all detectors at once

- Hold the pairing button in the main unit for 10 seconds until it beeps constantly and then release the button
- All former paired detectors are now erased from the Main Unit's memory, including the key tags
- Now pair all the working detectors that you want to be part of the system to the Main Unit, as well as the new/replacement detector(s)

Unpairing the main unit from the modem

- Press and hold the pairing button on the modem for 10 seconds. Fast flashing on the modem will confirm un-pairing of the main unit.

Unpairing of moisture sensors

The moisture sensors are paired to the modem and cannot be manually erased from memory.

Thus, this is a support operation you need to get performed by contacting Avara on post@avara.no. (we want to avoid that a user inadvertently may erase sensors and forever destroy valuable history from the moisture sensors).

Available products (with version number)

AV100	Main Unit
AV101	Propane Gas Detector
AV102	External detectors, exterior, with LED light
AV103	Intrusion detector, for doors and hatches
AV104	Siren, external. Complete with sound sensor and controller with battery box
AV105	Key tag/fob, for burglar alarm
AV106	Slave Unit, smoke detector and CO detector
AV107	Universal gas detector
AV108	Modem
AV109	Moisture Sensor, Avara Moist, 3-pack
AV110	Siren, exterior, without controller unit
AV111	Battery box, backup, 6V

Changes to this manual

- Ver. 6-22 - 23/6-2022 Reorganization of the entire manual after input from users.
- Ver. 11.2-21 - 26/11-2021 Updated description of burglar alarm activation.
- Ver. 11-21 - 22/11-2021 Corrected description of modem and head unit pairing.
- Ver. 06-21 - 30/6-2021 First version.



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